

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P1875PC00	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI2004/000317	International filing date (day/month/year) 25.05.2004	Priority date (day/month/year) 30.06.2003
International Patent Classification (IPC) or national classification and IPC D21H 27/00, D21H 19/12, D21H 19/82		
Applicant M-Real OYJ et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 17.01.2005	Date of completion of this report 01.07.2005
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2004/000317

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☐ the international application in the language in which it was filed
- ☐ a translation of the international application into _____ ,
which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
pages 1 - 7 _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☒ the claims:
pages _____ as originally filed/furnished
pages* _____ as amended (together with any statement) under Article 19
pages* 8 - 9 received by this Authority on 2005-05-02
pages* _____ received by this Authority on _____
- ☒ the drawings:
pages 1 _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI2004/000317

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-14</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-14</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document cited in the International Search Report:
D1: WO 0155507

The cited document represents the general state of the art.
The invention defined in claims 1-14 is not disclosed by this document.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed coated base paper characterised in that it comprises cellulose fibres based pigment-coated paper. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-14 is novel and is considered to involve an inventive step. The invention is industrially applicable.

02-05-2005

Claims amended 2 may 2005

1. Coated base paper, **characterized** in that it comprises cellulose fibres based pigment-coated paper, coated using pigment paste comprising kaolin or carbonate, and having 1 to 5 barrier layers, which barrier layer comprises a barrier chemical selected from the group comprising polyvinyl alcohol, acrylate-based barrier latexes and their mixtures.
2. Base paper according to claim 1, **characterized** in that the number of barrier layers is one.
3. Base paper according to claim 1 or 2, **characterized** in that the amount of barrier chemical in the base paper is 0.5 to 3 weight-%.
4. Base paper according to any one of claims 1 to 3, **characterized** in that the barrier chemical is polyvinyl alcohol having a short chain.
5. Base paper according to any one of claims 1 to 4, **characterized** in that the pigment-coated paper is primarily pigment-coated fine paper based on chemical pulp.
6. A method for the manufacture of coated base paper, **characterized** in that onto a pigment-coated paper based on cellulose fibres and coated using pigment paste comprising kaolin or carbonate, 1-5 barrier layers are applied by using a method not contacting the web, which barrier layer comprises a barrier chemical as an aqueous solution, selected from the group comprising polyvinyl alcohol, acrylate-based barrier latexes or their mixtures.
7. A method according to claim 6, **characterized** in that one barrier layer is applied.

8. A method according to claim 6 or 7, **characterized** in that the method not contacting the web is a curtain coating method or spray method.

5 9. A method according to any of claims 6 to 8, **characterized** in that barrier chemical is applied as an aqueous solution having a concentration of 3 to 50 weight-%.

10 10. A method according to claim 9, **characterized** in that barrier chemical is applied as an aqueous solution having a concentration of 3 to 25 weight-%, and that the solution being applied has a viscosity of at most 100 cP.

11. A method according to claim 10, **characterized** in that barrier chemical is applied as an aqueous solution having a concentration of 3 to 5 weight-%, and that the solution being applied has a viscosity of at most 50 cP.

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12. A method according to any of claims 6 to 11, **characterized** in that the application of the barrier layer is carried out as on-line coating.

20 13. A method according to any of claims 6 to 12, **characterized** in that after the application of the barrier layer, drying is carried out using a non-contacting drying technique.

25 14. The use of base paper according to any of claims 1 to 5, or of base paper manufactured by a method according to any of claims 6 to 13, as base paper for labels and release paper.